AMENDMENTS TO THE CLAIMS

1. (previously presented) A process for the manufacture of 1-chloro-1-fluoroethane, 1,1-difluoroethane or mixtures thereof, with reduced formation of heavy halogen-containing side products, by reaction between hydrogen fluoride and vinyl chloride reactants in the liquid phase, comprising

   (a) providing a liquid reaction mixture containing an organic solvent consisting of at least one saturated organic halogenated hydrocarbon so as to provide for dilution of said reactants by the halogenated hydrocarbon at all times of the reaction;

   (b) introducing said reactants into said liquid reaction mixture.

2. (previously presented) The process according to Claim 1, wherein the saturated halogen-containing hydrocarbon is selected from chloro-, fluoro- or chlorofluorohydrocarbons containing from 1 to 8 carbon atoms.

3. (previously presented) The process according to Claim 2, wherein the saturated halogen-containing hydrocarbon of the process is used as solvent.

4. (previously presented) The process according to Claim 1, wherein the reaction mixture contains, at all times, at least 55% by weight of solvent.

5. (previously presented) The process according to Claim 1, wherein the introduction of the vinyl chloride and hydrogen fluoride is controlled so that, at all times, the vinyl chloride content is less than 15% and that of hydrogen fluoride is less than 30% of the weight of the reaction mixture.

6. (previously presented) The process according to Claim 1, wherein the molar ratio between the hydrogen fluoride and the vinyl chloride used is at least 1 and does not exceed 20.

7. (previously presented) The process according to Claim 1, wherein the reaction is carried out in the presence of a hydrofluorination catalyst chosen from derivatives of metals of groups IIIa, IVa, IVb, Va, Vb and VIb of the Periodic Table of the elements, and their mixtures.

8. (previously presented) The process according to Claim 1, wherein the reaction is performed at a temperature of at least 40° and not exceeding 130°C and at a pressure at least equal to 2 bar and not exceeding 50 bar.

9. (previously presented) The process according to Claim 1, wherein the product is withdrawn continuously from the reaction mixture.

10. (previously presented) The process according to Claim 9, wherein the product is 1,1-difluoroethane, which is withdrawn in gaseous form.

11. (previously presented) A process for the manufacture of 1-chloro-1-fluoroethane, 1,1-difluoroethane or mixtures thereof y reaction between hydrogen fluoride and vinyl chloride, comprising:

(a) providing at least prior to the reaction an organic solvent consisting of at least one saturated organic halogenated hydrocarbon;

(b) introducing hydrogen fluoride and vinyl chloride reactants into the organic solvent;

(c) recovering 1-chloro-1-fluoroethane, 1,1-difluoroethane or mixtures thereof.

12. (previously presented) The process according to claim 11, wherein the reaction mixture contains, at all times, at least 55% by weight of solvent.

13. (previously presented) The process according to claim 11, wherein the introduction of vinyl chloride and hydrogen fluoride is controlled so that, at all times, vinyl chloride content is less than 15% and hydrogen fluoride content is less than 30% of the weight of the reaction mixture.

14. (previously presented) The process according to claim 11, wherein the molar ratio between hydrogen fluoride and vinyl chloride is at least 1 and does not exceed 20.

15. (previously presented) The process according to claim 11, wherein the reaction is carried out in the presence of a hydrofluorination catalyst chosen from derivatives of metals of groups IIIa, IVa, IVb, Va, Vb, and VIb of the Periodic Table of the elements, and mixtures thereof.

16. (previously presented) The process according to claim 11, wherein the reaction is performed at a temperature of at least 40°C and not exceed 130°C and at a pressure equal to 2 bar and not exceeding 50 bar

17. (previously presented) The process according to claim 11, wherein a desired product is continuously recovered.

18. (previously presented) The process according to claim 17, wherein said product is 1,1-difluoroethane, withdrawn in gaseous form.

19. (previously presented)The process according to claim 1, wherein said reaction is at a temperature between 80° and 110°C.

20. (previously presented) The process according to claim 11, wherein said reaction is at a temperature between 80° and 110°C.

21. (Currently amended) A process for the manufacture of 1-chloro-1-fluoro-ethane, 1,1-difluoroethane, or mixtures thereof, with reduced formation of heavy halogen-containing side products, by contacting hydrogen fluoride and vinyl chloride in a reaction mixture under such conditions that the vinyl chloride content is maintained in the reaction mixture at less than 15% by weight **through out the reaction**.

22. (previously presented) The process according to Claim 21, wherein said vinyl chloride content is at least 0.1% by weight.

23. (previously presented) The process according to Claim 21, wherein said vinyl chloride content is at least equal to 0.5% by weight and less than 10% by weight.

24. (previously presented) The process according to Claim 21, wherein said reaction mixture contains less than 30% by weight of hydrogen fluoride.

25. (previously presented) The process according to Claim 21, wherein the molar ratio between hydrogen fluoride and the vinyl chloride is at least 1 and does not exceed 20.

26. (previously presented) The process according to Claim 21, wherein the reaction is carried out in the presence of a hydrofluorination catalyst selected from the group consisting of

derivatives of metals of Groups IIIa, IVa, IVb, Va, Vb, and VIb of the Periodic Table of the Elements, and their mixtures.

27. (previously presented) The process according to Claim 21, wherein the reaction is performed at a temperature of at least 40° C and not exceeding 130° C and at a pressure at least equal to 2 bar and not exceeding 50 bar.

28. (previously presented) The process according to Claim 21, wherein a desired product selected from group consisting of 1-chloro-1-1 fluoroethane, 1,l-difluoroethane, and mixtures thereof is withdrawn continuously from the reaction mixture.

29. (previously presented) The process according to Claim 28, wherein said desired product is 1,l-difluoroethane in gaseous form.